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S.C. 5-10-04

#### AMENDMENTS TO THE CLAIMS:

Claims 1-28 were pending at the time of the Office Action.

Claims 1, 3, 5, 8, 13, 15, 18, 21, 23, and 26 are hereby amended.

Claims 2, 14, and 22 have been canceled.

New claims 29-31 have been added.

1. (Currently Amended) A method of simulating a volume of liquid within a tank during motion, comprising:

receiving tank geometry information;

receiving sensor configuration information;

receiving tank motion information;

computing one or more fuel-plane-to-sensor intersections for at least one tank position based on the tank motion information;

computing one or more wetted volumes, each wetted volume being computed at a fuel-plane-to-sensor intersection for each sensor location based on the sensor configuration information; and

computing a fuel quantity at every fuel-plane-to-sensor intersection based on a sum of the one or more wetted volumes;

computing an error for each computation of fuel quantity; and

comparing the error with at least one previously computed error.

2. (Canceled)

60483

CUSTOMER NUMBER